

Sinske HATTORI* & Obchant THAITHONG**: A new species
of *Frullania* (Hepaticae) from Java***

服部新佐*・O. タイトン**: ジャワ産ヤスデゴケ属の1新種***

Dr. A. Touw kindly sent us many unnamed Javanese specimens of *Frullania* from the Rijksherbarium, Leiden, among which we found an undescribed species of subgenus *Australes* (Verd.) Hatt. It is easily distinguished from all the other members of the subgenus by the perianth whose middle to lower portion is densely covered by a paraphyllium-like outgrowth.

Frullania (*Australes*) *tjibodensis* Hatt. et Thaith. sp. n. (Fig. 1).

A *Frullania campanulata* Sande Lac. et *F. malesiaca* Verd. differt perianthiis spinose paraphyllosis, lobulis foliorum vix campanulatis.

Plants small, in gregarious patches, on bark, reddish-brown; stems 5-10 mm long, with leaves ca. 1.5 mm wide, 0.13 mm in diam., irregularly pinnately branched. Lobes of stem-leaves widely spreading (dorsal margin almost at right angle with the stem), dorsally extending as wide as the stem beyond the farther edge of stem, slightly concave with narrowly incurved apex, when flat elliptical, 0.6-0.7 mm long and wide, apex rounded, dorsal margin widely arched toward the distinctly auriculate base; cavities of marginal cells 12-15 μ long and wide, pale yellowish-brown, walls more or less thick with small to medium-sized trigones (and often with intermediate thickenings), subhyaline, cavities of median cells 15-25 μ long and 15 μ wide, pale yellow, walls with nodulose but more or less flexuose-confluent trigones and intermediate thickenings, hyaline or nearly so, cavities of basal cells 25-35 \times 15-20 μ , pale brown, walls thin but with medium-sized to large trigones (and often with intermediate thickenings), yellow to yellow-brown; leaf-lobules comparatively large, slightly remote from and at angles of 10-30° with the stem, highly galeate, 0.35-0.4 mm long and 0.23-0.3 mm wide, equally inflated, apex obtuse, mouth wide, obliquely truncate (outer mouth-

* Hattori Botanical Laboratory, 3888, Obi-Honmachi, Nichinan, Miyazaki-ken 889-25. 服部植物研究所.

** Department of Botany, Chulalongkorn University, Bangkok.

*** This study was supported by the Japan Society for the Promotion of Sciences.

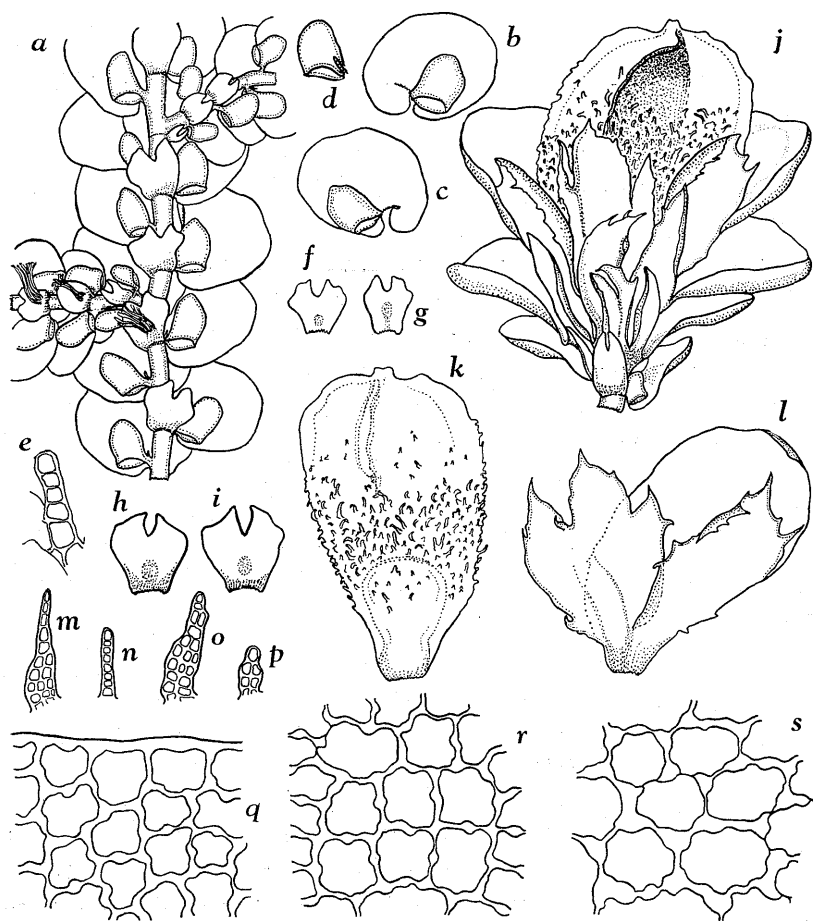


Fig. 1. *Frullania tjbodensis* Hatt. et Thaita. a. Portion of stem, ventral view, $\times 21$. b-c. Stem-leaves flattened, $\times 21$. d. Lobule and stylus of stem-leaf \pm flattened, $\times 27$. e. Stylus, $\times 210$. f-i. Stem-underleaves flattened, f-g $\times 21$, h-i $\times 27$. j. Gynoecium, ventral view, $\times 21$. k. Perianth, dorsal view, $\times 21$. l. Innermost female bract and bracteole flattened, $\times 21$. m-p. Paraphyllium-like outgrowths on the perianth-surface, $\times 108$. q-s. Cells of lobe of stem-leaf, q from margin, r from middle, s from base, all $\times 415$. All drawn from type (W. Meijer B-3695) by O. Thaitong except for d, h and i which were drawn by S. Hattori.

margin sinuate), beak slightly developed, minutely acute; style small, filiform, usually composed of ca. 5 minute, uniseriate cells. Stem-underleaves slightly distant, more or less appressed to the stem, 2-2.5 times as wide as the stem, obovate-obcuneate, 0.3-0.45 mm long and 0.25-0.42 mm wide, usu-

ally acutely or more frequently bluntly angular at upper 2/3 of lateral margins, ca. 1/3-bilobed, sinus narrowly obtuse to subacute, lobes triangular with acute apex, base obtuse, insertion transverse, rhizoid-initial area convex, rhizoids dark brown, in bundle, as long as the underleaves (or longer).

Dioecious. Androecia nearly sessile, lateral on stems and branches, capitate with 2-3 pairs of bracts. Gynoecia terminal on stems and branches or more often lateral on stem, when lateral gynoecial branches usually very short, with 1-2 pairs of leaves, when terminal innovating below, the innovation repeatedly floriferous; innermost bract-lobe elliptical, 2 mm long and less than 1.5 mm wide, with obtuse apex and entire margin, the lobule 1/3-1/2-connate, obovate-lanceolate with acuminate apex, 1.6 mm long and 0.8 mm wide, irregularly toothed; innermost bracteole obovate, ca. 1/5-connate at one side with the bract-lobule, 1.5 mm long and 0.9 mm wide, with ca. 2 small spinose teeth and rarely also very large triangular lacinia on lateral margin, ca. 1/3-bilobed, sinus subacute to obtuse, lobes oblong with acuminate-acute apex and usually with 1-2 small marginal teeth; perianth half-exserted, pyriform, ca. 2 mm long and 1.2 mm wide, strongly 3-keeled (third keel ventral), dorsal surface narrowly and acutely concave along median longitudinal line (otherwise slightly inflated), lower 2/3 of perianth with dense, irregular paraphyllium-like outgrowths which vary from filiform (of ca. 5 uniseriate cells) to foliaceous and almost 20-celled, perianth-apex widely subtruncate, with short beak.

Type: Java. Tjibodas, Gede Mt. Garden, 1425 m, 28-2-1953, leg. W. Meijer No. B 3695-Holotype in NICH (on bark of tree; +*Frullania meyeniana*, *F. apiculata*);—No. B 3733 (on bark of tree; +*F. reflexistipula*, *F. ornithocephala*). Kmp. Sampai, on Aegle tree-trunk in the sun, 1300 m, 16-7-1949, leg. Noesta Soehar 1967. Duplicates of the above specim. in L.

Distr: Java.

As shown in the Latin diagnosis this species is easily distinguished from *F. campanulata* Sande Lac. and *F. malesiaca* Verdc. (Hattori 1975a regarded *F. malesiaca* as a variety of *F. campanulata*) when the perianth is developed. From upper middle to near the base of the perianth, this new species densely bears paraphyllium-like outgrowths which vary in shape and size usually from filiform, being composed of about five uniseriate cells, to somewhat

narrowly foliaceous and almost 20-celled. There are several other Asian members of the subgenus *Australes*. They are: New Guinean *F. errans*, Verd., Bornean *F. mizutanii* Kamim. et Hatt., Indian *F. inflexa* Mitt., Chinese *F. delavayi* Steph., and Japanese *F. bidentula* Steph. (Hattori 1975 reduced both *F. delavayi* and *F. bidentula* to synonymy under *F. inflexa*), all of which have the smooth perianth not bearing such paraphyllium-like outgrowths. Kamimura (1961) proposed a new section, sect. *Delavaya*, for *F. delavayi* Steph. However, we do not think to separate it from *Australes*.

Frullania subgen. *Australes* (Verd.) Hatt., J. Hattori Bot. Lab. 40: 463 (1976). Syn.: *Frullania* subgen. *Frullania* sect. *Delavaya* Kamim., J. Hattori Bot. Lab. 24: 83 (1961).

References

- Hattori, S. 1975. A revision of Indian species of *Frullania* (Hepaticae) published by W. Mitten in 1861. Bull. Natn. Sci. Mus., ser. B, 1(2): 73-81. —, 1975a. Notes on the Asiatic species of the genus *Frullania*, Hepaticae. VIII. Ibid. 1(4): 141-163. Kamimura, M. 1961. A monograph of Japanese *Frullaniaceae*. J. Hattori Bot. Lab. 24: 1-109.

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最近オランダの Dr. A. Touw から送付を受けたジャワ産のヤスデゴケ属 *Frullania* の苔類の中に *Australes* 亜属の 1 新種を見出したので *Frullania tjibodensis* Hatt. et Thait. なる学名を付して記載した。この新種は花被の下半部にパラフィリウム状の突起を多数もつ。このような性質は他の *Australes* 亜属の種類ではみられない顕著な形質である。

□青海省生物研究所・同仁県隆務診療所編：青蔵高原薬物図鑑 第一冊，17×8cm，452 頁，184 図，別に原色 13 図，1972 年，青海人民出版社。少し古いが今まで日本に入っていなかったと思われるので紹介する。全 3 巻からなり，第二冊は鉱物，第三冊は動物である。青海省からチベット高原の薬用植物を図説したもので，チベット名，中国名，学名がつけられ，チベット名のアルファベット順に並べられている。記載のほかていねいな全形図と花や果実の解剖図があるので，小冊子ではあるが，よく植物が説明されている。シオガマギク属が 7 種ものせられていて，食中毒の薬として利用されているのは面白い。

中国では 1972 年頃，各地で薬用植物の図説を出版したらしい。湖南薬物志，云南中草药などよい図がのせられている。600 種に及ぶ図がある云南中草药など分類学上にもよい参考になる本である。

(山崎 敬)